

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

PTO/SB/30  
U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT**

**REQUEST  
FOR  
CONTINUED EXAMINATION (RCE)  
TRANSMITTAL**

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000,  
provides for continued examination of an utility or plant application  
Filed on or after June 8, 1995.  
See The American Inventors Protection Act of 1999 (AIPA).

Application Number	10/077,365
Filing Date	February 5, 2002
First Named Inventor	Gregory G. Rose, et al.
Group Art Unit	2135
Examiner Name	Truong, Thanhng B.
Attorney Docket Number	010027

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

**NOTE:** 37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicants may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.33(d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA. See Changes to Application Examination and Provisional Application Practice, Final Rule, 65 Fed. Reg. 50092 (Aug. 16, 2000); Interim Rule, 65 Fed. Reg. 14863 (Mar. 20, 2000), 1233 Off. Gaz. Pat. Office 47 (Apr. 11, 2000), which estimated RCE practice.

**1. Submission required under 37 C.F.R. § 1.114**

- a. ☐ Previously submitted
- i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on
- ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on
- iii. ☐ Other
- b. ☒ Enclosed
- i. ☒ Amendment/Reply
- ii. ☐ Affidavit(s)/Declaration(s)
- iii. ☐ Information Disclosure Statement (IDS)
- iv. ☐ Other

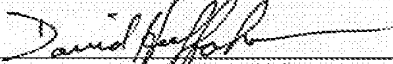
**2. Miscellaneous**

- a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of \_\_\_\_\_ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(l) required)
- b. ☐ Other

**3. Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 which the RCE is filed.

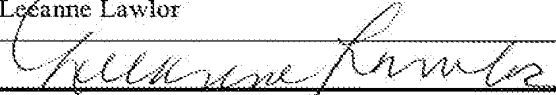
- a. ☒ The Director is hereby authorized to charge the following fees, or credit any overpayments, to Deposit Account No. 17-0026
- i. ☐ RCE fee required under 37 C.F.R. § 1.17(e)
- ii. ☒ Extension of time fee (37 C.F.R. §§ 1.136 and 1.117) (two months)
- iii. ☐ Other
- b. ☐ Check in the amount of \$ \_\_\_\_\_ enclosed
- c. ☐ Payment by credit card (Form PTO-2038 enclosed)

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**

Date	October 31, 2006	Signature	
David J. Huffaker, Reg. No. 56,771 for W. Chris Kim, Reg. No. 40,457 Phone No. 858-651-6295			

**CERTIFICATE OF MAILING OR TRANSMISSION**

I hereby certify that this correspondence is being transmitted via Electronic Filing System to the United States Patent and Trademark Office.

Name (Print Type)	Leanne Lawlor		
Signature		Date	October 31, 2006

Send all correspondence to Customer No. 023696 at the following address:

QUALCOMM Incorporated  
Attn: Patent Department  
5775 Morehouse Drive  
San Diego, California 92121-1714

**PATENT  
VIA ELECTRONIC FILING SYSTEM**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<b>In Re Application of</b>	)	
	)	<b>For: METHOD AND APPARATUS FOR</b>
<b>Gregory C. Rose <i>et al.</i></b>	)	<b>SIMPLIFIED AUDIO</b>
	)	<b>AUTHENTICATION</b>
	)	
<b>Serial No. 10/077,365</b>	)	<b>Examiner Truong, Thanhinga B.</b>
	)	
<b>Filed: February 15, 2002</b>	)	<b>Conf. No. 3723</b>
	)	
	)	<b>Art Unit 2135</b>

**AMENDMENT**

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the final Office Action dated May 31, 2006, the time for responding having

The Listing of Claims will replace all prior versions and listings of claims in the present patent application:

### LISTING OF CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An authentication apparatus operable to produce a secure identifier, the apparatus comprising:
  - a processor;
  - a clock coupled to the processor configurable to generate a time element;
  - a memory element coupled to the processor configurable to store a private key and public key information;
  - at least one actuator coupled to the processor;
  - a signature generator coupled to the processor operable to generate a digital signature, the digital signature being a function of the private key and the time element; and
  - an emitter coupled to the ~~signal~~ signature generator operable to emit the secure identifier, the secure identifier comprising the digital signature, time element, and public key information.
2. (Original) The apparatus set forth in Claim 1, the signature generator further comprising:
  - a random number generator coupled to the processor to encrypt the digital signature.
3. (Original) The apparatus set forth in Claim 1, wherein the time element comprises a predetermined number of least significant bits of the time.
4. (Original) The apparatus set forth in Claim 1, further comprising an input element coupled to the processor, the input element capable of receiving a personal identification number (PIN).
5. (Original) The apparatus set forth in Claim 1, further comprising an input element coupled to the processor, the input element capable of receiving a challenge.
6. (Original) The apparatus set forth in Claim 1, further comprising a display coupled to the processor, the display capable of displaying key identifiers.

7. (Original) The apparatus set forth in Claim 1, wherein the secure identifier emitted is emitted as an audio tone.
8. (Original) The apparatus set forth in Claim 1, wherein the secure identifier emitted is emitted as an optical signal.
9. (Original) The apparatus set forth in Claim 1, wherein the actuator is a push-button switch.
10. (Original) The apparatus set forth in Claim 1, wherein the actuator is a voice activated switch.
11. (Original) The apparatus set forth in Claim 1, wherein the public key information is a public key identifier.
12. (Original) The apparatus set forth in Claim 11, wherein the public key identifier is derived from the public key information.
13. (Original) The apparatus set forth in Claim 1, wherein the public key information is the public key.
14. (Original) The apparatus set forth in Claim 1, wherein the digital signature is encrypted using a personal identification number (PIN).
15. (Original) A method of authenticating, comprising:
  - generating a time element;
  - identifying a key identifier;
  - generating a digital signature;
  - generating a secure identifier as a function of the time element, the key identifier, the digital signature; and
  - emitting the secure identifier.
16. (Original) The method set forth in Claim 15, further comprising identifying a PIN, and wherein generating a digital signature is further a function of the PIN.

17. (Original) The method set forth in Claim 15, wherein the secure identifier emitted is emitted as an audible tone.

18. (Original) The method set forth in Claim 15, wherein the secure identifier emitted is emitted as an optical signal.

19. (Original) The method set forth in Claim 15, wherein the digital signature is derived from a private key.

20. (Original) An authentication receiver, comprising:

a receiver configurable to receive a secure identifier, the secure identifier comprising:

a digital signature, the digital signature comprising information derived from a private key,

a public key identifier; and

a time identifier; and

a verifier configurable to verify the secure identifier, the verifier comprising:

memory comprising information corresponding to the public key information received and time tolerance information;

a key retriever coupled to the memory and configurable to retrieve a public key corresponding to the public key identifier; and

a time verifier coupled to the memory and configurable to verify that the received time identifier falls within acceptable time tolerances.

21. (Original) The apparatus set forth in Claim 20, the secure identifier further comprises a PIN, and wherein the receiver is configurable to decrypt the digital signature using the PIN.

22. (Original) The apparatus set forth in Claim 20, wherein the key retriever compares the public key identifier received to public key information stored in memory.

23. (Original) The apparatus set forth in Claim 20, wherein the time tolerance information comprises information regarding clock drift.
24. (Original) The apparatus set forth in Claim 20, wherein the secure identifier is emitted as an audible tone.
25. (Original) The apparatus set forth in Claim 20, wherein the secure identifier is emitted as an optical signal.
26. (Original) A method of authenticating, comprising:  
receiving a secure identifier, the secure identifier comprising a digital signature, a key identifier, and a time identifier; and  
verifying the secure identifier, verifying comprising:  
verifying that the public key identifier received corresponds to known information regarding the public key identifier received; and  
verifying the time identifier such that the time identifier received is within predetermined time tolerances.
27. (Original) The method set forth in Claim 26, the digital signature further comprises a PIN, and where receiving further comprises decrypting at least a portion of the digital signature using the PIN.
28. (Original) The method set forth in Claim 26, wherein the secure identifier received is received as an audible tone.
29. (Original) The method set forth in Claim 26, wherein the secure identifier received is received as an optical signal.
- 30-43 (Cancelled)
44. (Previously Presented) Apparatus for authenticating, comprising:  
means for generating a time element;  
means for identifying a key identifier;  
means for generating a digital signature;

means for generating a secure identifier as a function of the time element, the key identifier, the digital signature; and

means for emitting the secure identifier.

45. (Previously Presented) The apparatus set forth in Claim 44, further comprising means for identifying a PIN, and wherein means for generating a digital signature is further a function of the PIN.

46. (Previously Presented) The apparatus set forth in Claim 44, wherein the secure identifier emitted is emitted as an audible tone.

47. (Previously Presented) The apparatus set forth in Claim 44, wherein the secure identifier emitted is emitted as an optical signal.

48. (Previously Presented) The apparatus set forth in Claim 44, wherein the digital signature is derived from a private key.

49-54 (Cancelled)

55. (Currently Amended) Apparatus for authenticating, comprising:  
means for receiving a secure identifier, the secure identifier comprising a digital signature, a key identifier, and a time identifier; and

means for verifying the secure identifier, ~~verifying~~ comprising:

means for verifying that the public key identifier received corresponds to known information regarding the public key identifier received; and

means for verifying the time identifier such that the time identifier received is within predetermined time tolerances.

56. (Previously Presented) The apparatus set forth in Claim 55, the digital signature further comprises a PIN, and where means for receiving further comprises decrypting the digital signature using the PIN.

57. (Previously Presented) The apparatus set forth in Claim 55, wherein the secure identifier received is received as an audible tone.

58. (Previously Presented) The apparatus set forth in Claim 55, wherein the secure identifier received is received as an optical signal.



## REMARKS

Claims 1-29, 44-48, and 55-58 are pending in the present application.

In the previous amendment filed on March 7, 2006, claims 30-43 and 49-54 were canceled without prejudice.

In the above amendments, claims 1 and 55 have been amended to correct for minor informalities. Therefore, after entry of the above amendments, claims 1-29, 44-48, and 55-58 will be pending in this application. Applicants believe that the present application is now in condition for allowance, which prompt and favorable action is respectfully requested in view of the foregoing amendments and the following remarks.

### Claim Rejections – 35 U.S.C. § 102

Claims 1-2, 4-19, and 44-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Tello, (hereinafter “Tello”), U.S. Patent No. 6,463,537.

With reference to independent claims 1, 15, and 44, it is respectfully submitted that Tello does not teach nor suggest certain claimed features.

In particular, Tello does not teach nor suggest the claimed features of “the digital signature being a function of the private key and the time element” nor “the secure identifier comprising the digital signature, time element, and public key information” (emphasis added) as claimed in independent claim 1.

Likewise, Tello does not teach nor suggest the claimed features of “generating a secure identifier as a function of the time element, the key identifier, the digital signature” (emphasis added) as claimed in independent claim 15 nor the claimed features of “means for generating a secure identifier as a function of the time element, the key identifier, the digital signature” (emphasis added) as claimed in independent claim 44.

In those portions of Tello relied upon by the examiner in the Final Office Action, it is respectfully submitted that Tello simply does not teach the use of a “time element” as

identified above and explicitly claimed in each of independent claims 1, 15, and 44. To be sure, Tello does teach a clock 152 (e.g., see col. 6, line 66 and Fig. 2) and a timer (col. 7, line 61). However, Tello does not teach nor suggest using a time element generated by the clock or timer in the manner claimed in each of independent claims 1, 15, and 44. Therefore, it is respectfully requested that the examiner withdraw the 102 rejections of these claims.

Dependent claims 2-14, 16-19, 45-48 are allowable at least for the reasons given above in view of their dependency from their respective parent claims.

In addition, with respect to dependent claim 7 (and similarly claimed in dependent claims 17 and 46), it is respectfully submitted that Tello does not teach or suggest the additional claimed features of “wherein the secure identifier emitted is emitted as an audio tone” (emphasis added).

In addition, with respect to dependent claims 8, 18, and 47, it is respectfully submitted that Tello does not teach or suggest the additional claimed features of “wherein the secure identifier emitted is emitted as an optical signal” (emphasis added).

In those portions of Tello relied upon by the examiner in the Final Office Action, Tello does not teach nor suggest emitting a secure identifier as either an audio tone or an optical signal, as explicitly required by the respective dependent claims.

### **Claim Rejections – 35 U.S.C. § 103**

Claims 3, 20-29, 55-58 are rejected under 35 USC 103(a) as being unpatentable over Tello and further in view of Akiyama (hereinafter “Akiyama”), US Patent No. 5,784,464.

With reference to independent claims 20, 26, and 55, it is respectfully submitted that neither Tello nor Akiyama, alone or in combination, teaches or suggests certain claimed features.

In particular, neither reference, alone or in combination, teaches or suggests the claimed

features of a “secure identifier” comprising a “time identifier” nor a verifier comprising “a time verifier coupled to the memory and configurable to verify that the received time identifier falls within acceptable time tolerances” (emphasis added) as claimed in independent claim 20 and similarly claimed in independent claims 26 and 55. In addition, neither reference teaches or suggests a memory having “time tolerance information” as explicitly claimed in claim 20.

Tello does not teach a secure identifier comprising a time identifier for substantially the same reasons as given above vis a vis independent claims 1, 15, and 44. Nor does Tello teach the claimed features of “time verifier .... to verify that the received time identifier falls within acceptable time tolerances” as claimed in independent claim 20 and similarly claimed in independent claims 26 and 55. On page 11 of the Final Office Action, the examiner alleges that col. 7, lines 58-61 of Tello teaches such a claimed time verifier. However, in those portions of Tello, as recognized by the examiner in the office action, Tello merely teaches that the security engine microprocessor controls various interrupts, such as the computer CPU, reset, etc. It is respectfully submitted that such a teaching cannot be reasonably interpreted to teach a “time verifier” as claimed.

Akiyama does not cure these deficiencies of Tello. The examiner relies upon Akiyama to allegedly teach “time tolerance information” and relies upon key update timer 17 of Akiyama in support thereof. In Akiyama, the key update timer 17 is a timer for regulating a timing of processing in the key update processing unit 16 and cannot be relied upon to teach time tolerance information nor the manner in which the time tolerance information is used in independent claims 20, 26, and 55.

Dependent claims 3, 21-25, 27-29, and 56-58 are allowable at least for the reasons given above in view of their dependency from their respective parent claims.

In addition, with respect to dependent claims 24, 28, and 57, it is respectfully submitted that Tello does not teach or suggest the additional claimed features of “wherein the secure identifier is emitted as an audible tone” (emphasis added).

In addition, with respect to dependent claims 25, 29, and 58, it is respectfully submitted that Tello does not teach or suggest the additional claimed features of “wherein the secure identifier is emitted as an optical signal” (emphasis added).

In those portions of Tello relied upon by the examiner in the Final Office Action, Tello does not teach nor suggest emitting a secure identifier as either an audio tone or an optical signal, as explicitly required by the respective dependent claims.

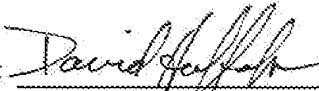
**CONCLUSION**

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

Dated: October 31, 2006

By:   
David J. Huffaker, Reg. No. 56,771  
For W. Chris Kim, Reg. No. 40,457  
(858) 651-6295

QUALCOMM Incorporated  
Attn: Patent Department  
5775 Morehouse Drive  
San Diego, California 92121-1714  
Telephone: (858) 658-5787  
Facsimile: (858) 658-2502